

# Construction Inspection Framework Update

John Caruano  
DeIDOT Support Engineer





# Framework Goals

- Appropriate Staff Attendance
- Alleviate Multiple Punch lists
- Timelier Acceptance of Projects



STATE OF DELAWARE  
DEPARTMENT OF TRANSPORTATION  
800 BAY ROAD  
P.O. BOX 778  
DOVER, DELAWARE 19903

JENNIFER COHAN  
SECRETARY

## MEMORANDUM

**TO:** All of Transportation Solutions  
All of Maintenance and Operations  
All of Planning

**FROM:** Shanté Hastings, Chief Engineer, Transportation Solutions *SAH*  
Anne Brown, Director, Maintenance and Operations *AB*  
Drew Boyce, Director, Planning *DMB*

**DATE:** February 11, 2020

**SUBJECT:** **New Inspection Framework**

Attached is the new Inspection Framework for the inspection and acceptance of projects into the Department's maintenance responsibility. This new framework is intended to have all the appropriate staff attend the field inspections to answer questions, learn, and allow issues to be discussed and handled in a timelier manner. It is also intended to alleviate multiple punch lists for the contractors to address and to allow for the timelier acceptance of projects.

You will notice new terminology for the inspections, which is intentional as this is a new process. The intent is for 2020 to be a trial implementation period to learn the benefits of and to identify issues with this new process. At the end of 2020, assuming enough data is available, the process will be reviewed, and adjustments will be made as deemed necessary.

We expect full participation of the appropriate staff at the appropriate level to ensure timeliness of the reporting and action items. Implementation will be effective March 1, 2020.

Any questions or concerns should be directed to Maureen Kelley, Chief of Environmental and Administrative Support.

SH:bm





# Initial Inspection

- Performed by Administering Section prior to Contractor demobilization
  - Invite M&O District Representatives.
- Compile a list of deficiencies to be addressed (including E&S, ADA, Safety, Bridge Management, etc.) before Primary Inspection.



The Primary Inspection for the referenced project will be scheduled upon completion of the following items of work:

1. Installation of All Construction Signs. (Contract Items)
2. Installation of All Roadway Striping. (Contract Item)
3. Remove all Sediment Bags from Inlets. (Contractor's Responsibility)
4. Repair Chips in Sidewalk project wide. (Contractor's Responsibility)
5. Clean concrete splatter from neighboring parcels, buildings, sidewalk, etc. (Contractor's Responsibility)
6. Installation of Polymeric Sand in Brick project wide. (Contractor's Responsibility)
7. Seal all cracks in concrete project wide. (Contractor's Responsibility)
8. Seal around the Manhole/Valve Adjustments in roadway. (Contractor's Responsibility)
9. Topsoil, Grass Seed and Erosion Control Blanket low spots, missed areas adjacent to sidewalk, etc. (Contractor's Responsibility)



# Initial Inspection Punch List

20. Install 5" solid white permanent pavement striping from STA 1+50, LT to STA 2+50, LT and from STA 102+50, LT to STA 103+15, LT in accordance with plan sheet 24. *(Contract item to be paid under existing contract items)*



21. Extend 5" solid white permanent pavement striping for bike lane to STA 106+80, LT in accordance with plan sheet 25. *(Contract item to be paid under existing contract items)*



22. Newly installed permanent pavement markings from STA 106+50, LT to STA 110+50, LT were observed to be damaged. They appeared to be brown, burnt or over sprayed with fog seal. They must be repaired in order for the permanent pavement markings to accurately reflect the intended roadway guidance. The Contractor shall re-stripe damaged lines. *(Incidental to previously paid contract item)*



23. A temporary stop bar was observed at STA 6+75, RT on Pennsylvania Ave that was not covered in full by the permanent striping. It must be removed in order for the permanent pavement markings to accurately reflect the intended roadway guidance. Removal of pavement markings shall be in accordance Section 817.03.9. Use shot/abrasive grit blasting or water blasting equipment to remove pavement marking paint. After removal of striping on bituminous concrete, an approved flat black paint or asphalt sealer shall be used to cover any exposed aggregate or embedded paint. *(Incidental to previously paid contract item)*



24. An existing epoxy white line was observed at STA 104+15, RT on Southbound SR 1 that was not properly removed in full. It must be removed in order for the permanent pavement markings to accurately reflect the intended roadway guidance. Removal of pavement markings shall be in accordance Section 817.03.9. Use shot/abrasive grit blasting or water blasting equipment to remove pavement marking paint. After removal of striping on bituminous concrete, an approved flat black paint or asphalt sealer shall be used to cover any exposed aggregate or embedded paint. *(Incidental to previously paid contract item)*



25. Fill all sign post core holes and PVC sign post sleeves with GABC, Type B at the following locations. *(Contract item to be paid under existing contract items)*



- 25a. STA 103+25, LT, One Way/Divided Highway Sign  
25b. STA 107+35, LT, Type 3 Object Marker Sign

26. All sign posts need the breakaway feature to be within 1" to 4" from the top of grade and shall be equipped with corner bolts in accordance with Standard Construction Detail T-15 (2013) sheet 1 of 1. The breakaway feature of the "North SR 1" sign at STA 106+20, LT was observed to not be adjusted to the correct height. Check and correct all sign posts within the Limits of Construction to ensure that all comply with the Standard Construction Details to allow for the proper operation of the assembly in the event of a vehicular impact. *(Incidental to previously paid contract item)*



# Initial Inspection Timeline

- Initial Inspection Punch List to the Contractor 7 days after Initial
- Provide a required completion date for Initial Inspection Punch List
- Maintain the Initial Inspection Punch List with dates that items are completed.
- After ALL initial items are addressed Primary Inspection can be scheduled.

**Completed on** 3. Address all items on E&S Inspection Report dated July 15, 2020 or most current report. To be sent under separate cover. This work must be completed prior to acceptance. *(Incidental to previously paid contract item)*  
8/31/2020

**Completed on** 4. Address all items on BMP 1013 Initial Inspection Report dated July 9, 2020. To be sent under separate cover. *(Incidental to previously paid contract item)*  
8/31/2020

**Completed on** 5. Address all items on ADA Compliance Review Report & Measurements dated July 20, 2020. To be sent under separate cover. *(Incidental to previously paid contract item)*  
8/26/2020





# Primary Inspection

- The Administering Section will schedule a date/time with ES and invite others
- The Administering Section generates Primary Inspection punch list from discussion with those in attendance.





# Primary Inspection Timeline

- DRAFT Primary Inspection Punch List sent to the inspection team within 7 calendar days for concurrence/review
- Final Primary Inspection Punch List sent to the Contractor within 14 Calendar Days (including 7 days for internal review).
- The Contractor will have 30 Calendar Days to complete the Primary Inspection Punch List.




4. Seal cracks observed on the top of the pole base (PL/1) at approx. Sta 21+25 Left. (Contractor's Expense)
5. Clean and provide access to the water valves located in the sidewalk and curb at approx. Sta 21+30 Right to Sta 21+75 Right. (Contractor's Expense)
6. Adjust the break-away assembly per Standard Construction Detail T-15 at Keep Right Sign (9C) at Sta 22+00 Left. (Contractor's Expense)
7. Install the missing alkylid-thermoplastic pavement striping, white symbol/legend (Item 817002) at the North District DOTS Building entrance at Sta 22+25 Right shown on Sheet 20 of the plan set. (Contract Pay Item)
8. Install delineator(s) on the leading ends / corners of the islands. (Incidental to Pay Item 702000)
9. Grade to a maximum of 6:1, apply topsoil, seed, and blanket a minimum of 2' behind the sidewalk at approx. Sta 22+75 Right to Sta 23+20 Right. (Contractor's Expense)
10. Patch the top of the pole base (PL/3) to match the grades at the edge of sidewalk at approx. Sta 22+82 Right. (Contractor's Expense)



# Final Acceptance

- The Administering Section notifies District Engineer and Maintenance Engineer that ALL Primary Punch list items are addressed
  - Includes date addressed and any remedial actions
- Maintenance to verify all items are addressed within 30 calendar days
- Maintenance to accept

4. Backfill around ET approximate Sta: 52+40. Cold patch any voids in maintenance strip between Sta: 44+75 Rt to 53+00 Rt. Dupont Road. Areas between Sta: 44+75 to 52+40 Rt Dupont Road. (Incidental to contract) North of 52+40 T&M. **Completed 8/3/20**
5. Trim tree above sidewalk Sta: 52+50 RT. Currently a branch is hanging below the required 8' clearance height. (Incidental to contract) **Completed 8/10/20**
6. Sawcut/caulk joints in curb within landing of curb ramp pedestrian connection Sta: 53+35 Rt. Dupont Road. Joint spacing of curb exceeded 10' at this location. (Incidental to contract) **Completed 8/3/20**
7. Permanent Signs breakaway sleeves not at proper elevation at the following locations: sign 3A Sta: 51+25 Lt and Stop Sign at intersection of Boulevard Road/Eastwood Road. (Incidental to contract) **Completed 8/3/20**
8. Fill in expansion dam vent holes at North and South Abutment. (Incidental to contract) **Completed 8/4/20**

  
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NIKOLE MAJORS  
 SECRETARY

**MEMORANDUM**

**TO:** Anne Brown, Director, Maintenance and Operations  
**VIA:** LaTonya Gilliam, North District Engineer *LJG*  
**FROM:** Chris Costello, Group 1 Construction Engineer *CC*  
**DATE:** January 29, 2021  
**SUBJECT:** Contract No. F201507403, BR 1-634 SR 100 on DuPont Road over East Penn Railroad, FAP No. EBH05-N027(03)


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The referenced project has been completed in reasonable conformance with the applicable plans and specifications. All items identified during the ADA Inspection and Final Inspection have been completed.

Formal acceptance of the project by the Department of Transportation can now be made. The attached Acceptance Letter has been prepared for signature by the Director of Maintenance and Operations. In order to allow for the efficient and timely acceptance and close out of this project, if Maintenance and Operations is not able to concur with the acceptance of this project, please provide a list within 30 days of the date of this memo specifying any outstanding items/concerns as to why the Acceptance Letter cannot be signed.

Additionally, be advised that the following items (if so noted) were included as part of the construction of this contract:

ITEM	
Landscape Plantings	___ Yes <u>X</u> No
Highway Lighting	___ Yes <u>X</u> No







# Inspection Framework Progress

- 97 projects (Effective Date March 1, 2020 )
  - 49 Construction (31 New Castle, 11 Kent, 7 Sussex)
  - 32 Public Works (16 New Castle, 2 Kent, 14 Sussex)
  - 16 Maintenance (9 New Castle, 0 Kent, 7 Sussex)





# Framework Positives

- Communication improving between all sections and ES
- 85% +/- doing a really good job with framework (occasional questions arise)
- 35 days +/- on average from request to primary inspection (30 day goal)
- All sections have strived to get punch lists out in timely manner





# Where can we improve?

- CTF projects
  - Requested per work order completion.
- ADA inspections
  - Larger projects bog down the timeline. Schedule earlier and inspect in phases
- Administering Section List Generation
  - Primary Inspection Punch list for review and distribution to contractor within the specified timeline





# Where can we improve?

- Acceptance
  - Maintenance questioning design. If contract built per plan this is not grounds to hold up acceptance.
- Construction waiting on lists from maintenance.
- Initial Inspection Punch List
  - Addressed punch list not always submitted to ES
  - Administering section needs to identify items on initial inspection ahead of the primary inspection.







# Primary Inspection Repeat Offenders

- Signs
- Concrete joints
- Inlets (flow channel, steps, grate orientation)
- Vegetative Stabilization
- Guardrail
- Joint Sealing
- Sidewalk/Shared Use Path Adjacent Grading
- Utility cover access





# ADA Inspection Repeat Offenders

- DWS placement
- Vertical differences (expansion material, pavement, retro-fit concrete tie-ins)
- Turning/clear space
- Vertical clearance and protrusions (vegetation, guy wires, signs)
- Horizontal openings
- Counterslope
- Debris (hinders inspection)





# Questions/Comments

**Thank you!**

**John Caruano**

*DelDOT Support Engineer*

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